

CLAIMS

1. An austenitic stainless steel less crack-sensitive during forming,
which has the composition consisting of C up to 0.04 mass %, 0.1-1.0
5 mass % Si, Mn up to 5.0 mass %, S up to 0.0060 mass %, Al up to 0.003
mass %, 5-9 mass % Ni, 15-20 mass % Cr, N up to 0.035 mass %, 1.0-5.0
mass % Cu and the balance being Fe except inevitable impurities, and has
nonmetallic MnO-SiO₂-Al₂O₃ inclusions, which contains not less than 15
mass % of SiO₂ and not more than 40 mass % of Al₂O₃, dispersed in its
10 matrix.

2. A method of manufacturing austenitic stainless steel, which
comprises the steps of:

preparing a molten steel having the composition consisting of C up to
0.04 mass %, 0.1-1.0 mass % Si, Mn up to 5.0 mass %, S up to 0.0060
15 mass %, Al up to 0.003 mass %, 5-9 mass % Ni, 15-20 mass % Cr, N up to
0.035 mass %, 1.0-5.0 mass % Cu and the balance being Fe except
inevitable impurities;

covering said molten steel with basic slag in a vacuum or
non-oxidizing atmosphere; and

20 strongly deoxidizing said molten steel by addition of a Si alloy whose
Al content is controlled less than 1.0 mass %.